

## ABSTRACT OF THE DISCLOSURE

An apparatus configured to control a magnetic field strength of a magnetic lens is provided. The apparatus may include a magnetic sensor configured to generate an output  
5 signal responsive to a first magnetic field strength of the magnetic lens. The apparatus may also include a control circuit coupled to the magnetic sensor and the magnetic sensor. The control circuit may be configured to receive the output signal from the magnetic lens and to receive an input signal responsive to a predetermined magnetic field strength. The control circuit may be further configured to generate a control signal  
10 responsive to the output signal and the input signal. Additionally, the control circuit may be configured to apply a current to the magnetic lens such that a second magnetic field strength may be generated within the magnetic lens closer to the predetermined magnetic field strength than the first magnetic strength.